

an inductive plasma torch (2) directed towards the free surface of the silicon load contained in the crucible; and

B1 a removable magnetic yoke (3) between the plasma torch (2) and the crucible (1) for inverting a stirring direction of the silicon load, the yoke being ring-shaped to enable the passing of the plasma flame (f).

Please cancel claims 5 and 6 without prejudice.

Please add new claims 11 and 12 as follows:

11. (NEW) A silicon refining method comprising the steps of:

filling a cold inductive crucible (1) with solid silicon;

melting the content of the crucible;

creating, by means of the inductive crucible, a turbulent stirring of the silicon melt (b) by

B2 bringing the liquid from the bottom of the crucible to the free surface by ascending along the central axis of the crucible;

directing a plasma (f) generated by an inductive plasma torch (2) towards the melt surface for a duration enabling elimination of impurities for which the reactive gas (g_r) of the plasma is adapted;

inverting the melt stirring direction; and

injecting, as a reactive gas (g_r) of the plasma, an element enabling doping of the silicon.

12. (NEW) The method of claim 11, wherein the reactive gas (g_r) injected to dope the silicon is hydrogen.
